

## ABSTRACT

A method and a system to adapt the load balancing of the incoming traffic over the planes of a parallel packet switch (PPS) on the basis of the monitoring of requests and acknowledgments exchanged between ingress port adapters and arrays of collapsed virtual output queues (cVOQ) situated within the plane switch cores is disclosed. According to the invention, at least one counter is associated, in each ingress port-adaptor, to each individual switching plane or device to be monitored. Each of these counters is incremented when a request is sent to the corresponding individual switching plane or device and decremented when an acknowledgment is received from this individual switching plane or device. When the range of values taken by the counters of a same ingress port-adaptor reaches a predetermined threshold, less (or none) incoming traffic is further transmitted to the individual switching plane or device associated to the higher value counter. An alarm signal is possibly raised too e.g., for replacing the defective individual switching plane or device.